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Intel® Pentium® 4 Processor with HT Technology Comparison Guide

Introducing a turbo-charged experience
for consumer desktop PCs

April 2003



**The Intel® Pentium® 4 Processor with
HT Technology gives consumers the
power to do more at the same time without
sacrificing performance—for an incredible
PC experience today, and plenty of
headroom for what's coming tomorrow.**



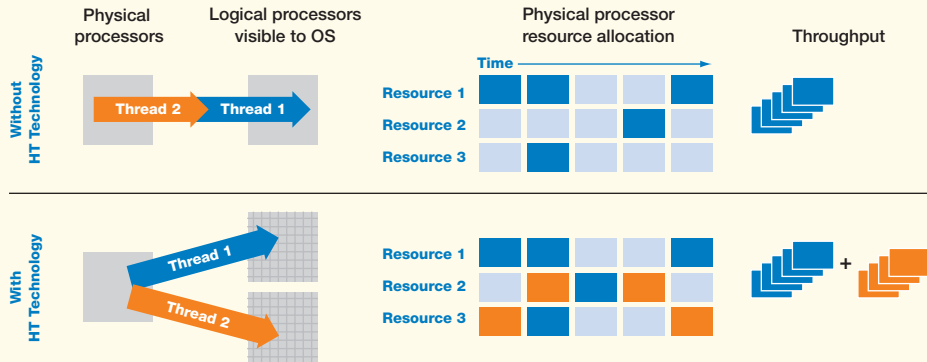
- **Delivers an extra gear of performance**
- **Lets Microsoft* Windows* XP “see” two processors instead of one**
- **Gives consumers the power to do more at once**
- **Designed for the future of software, the Internet and computing technology**

What is Hyper-Threading Technology?

HT Technology is a desktop processor advancement that allows Windows XP to “see” two processors instead of one, for an immediate performance improvement, especially when multitasking. Pioneered on Intel’s most sophisticated server processors, HT Technology is now available to consumers on the Intel® Pentium® 4 Processor with HT Technology.

A helpful analogy for explaining HT Technology is a chef trying to cook an elaborate dinner with only one pan. Adding a second pan would allow the chef to complete the meal much faster. In the same way, HT Technology processes two streams of tasks simultaneously, allowing users to do more in less time.

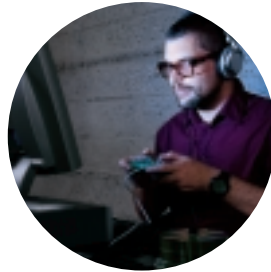
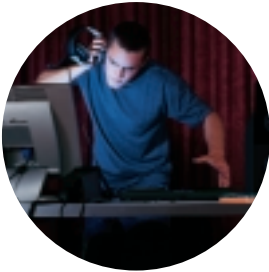
How Hyper-Threading Technology works



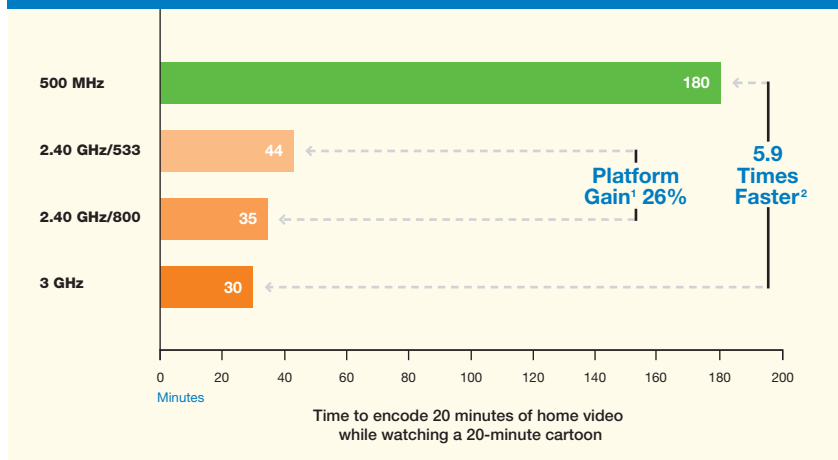
Greater resource utilization equals greater performance and responsiveness

Unmatched Platform Performance: Do More at Once with HT Technology

The Intel Pentium 4 Processor with HT Technology gives consumers the power to get the most out of today's advanced programs and games—and to do more things at once without slowing down.



Example using Microsoft Movie Maker* and Microsoft Media Player*



¹When comparing an Intel® Pentium® 4 processor with HT Technology 2.40 GHz/800 FSB to an Intel® Pentium® 4 processor 2.40 GHz/533 FSB

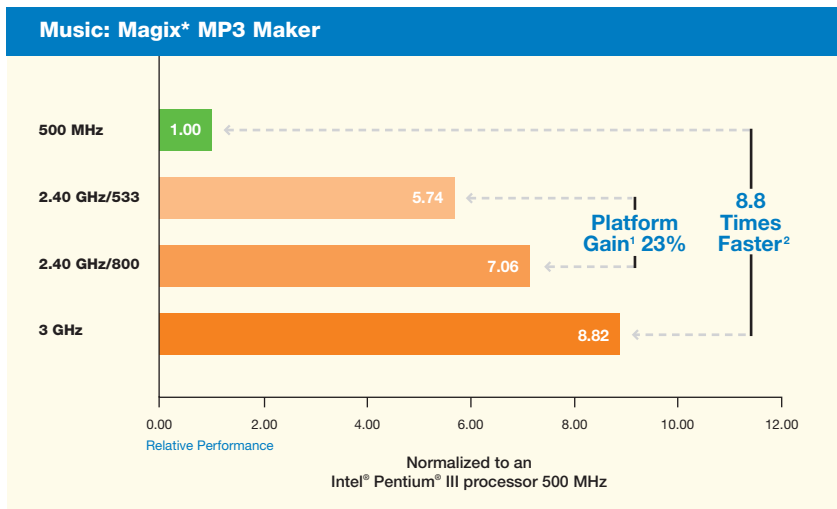
²When comparing an Intel® Pentium® 4 processor with HT Technology 3 GHz/800 FSB to an Intel® Pentium® III processor 500 MHz



See configurations on the back page of this guide.

- Play a game while running a continuous virus scan
- Manage a photo library while encoding music in the background
- Edit the latest family video while encoding an MP3 music collection

Unmatched Platform Performance: Turbo-Charged Music and Enhanced Video Experience



- Easily and quickly convert music to MP3s
- Quickly create music mixes
- Play, download and convert music all at once

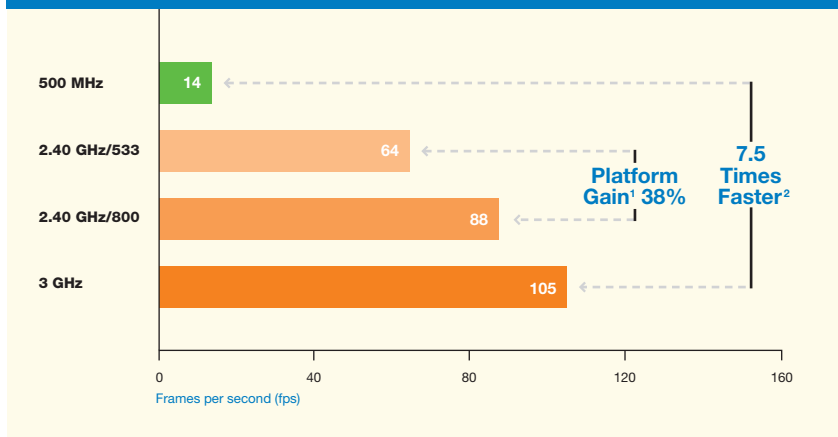
¹When comparing an Intel® Pentium® 4 processor with HT Technology 2.40 GHz/800 FSB to an Intel® Pentium® 4 processor 2.40 GHz/533 FSB

²When comparing an Intel® Pentium® 4 processor with HT Technology 3 GHz/800 FSB to an Intel® Pentium® III processor 500 MHz



See configurations on the back page of this guide.

Video: XMPG with DivX*



¹When comparing an Intel® Pentium® 4 processor with HT Technology 2.4 GHz/800 FSB to an Intel® Pentium® 4 processor 2.4 GHz/533 FSB

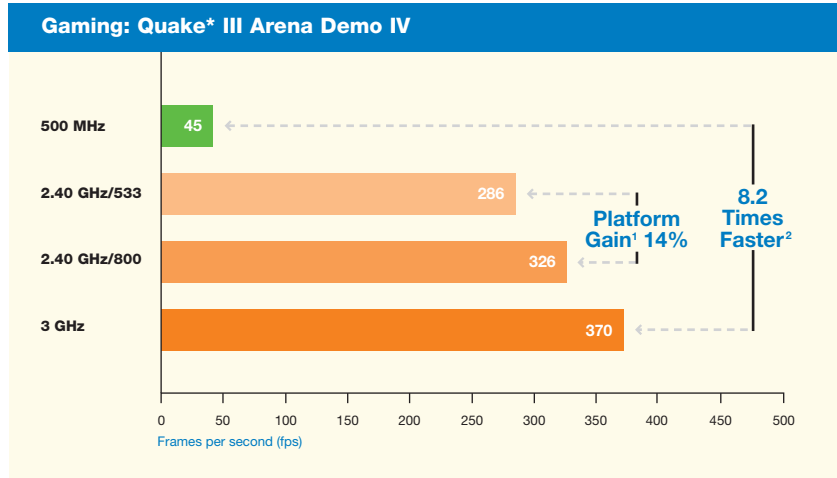
²When comparing an Intel® Pentium® 4 processor with HT Technology 3 GHz/800 FSB to an Intel® Pentium® III processor 500 MHz



See configurations on the back page of this guide.

- Add transitions, effects and filters on the fly
- Create feature films in less time
- Record live TV in the background without sacrificing performance

Unmatched Platform Performance: Accelerated Gaming and More Photo Creativity



- Get the performance needed for today's leading-edge games
- Experience incredible realism through advanced artificial intelligence and physics engines
- Run background tasks without affecting the gaming experience

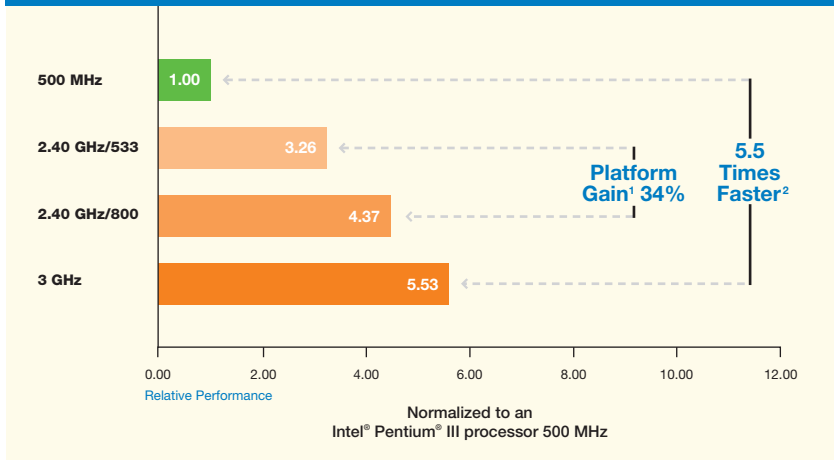
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See configurations on the back page of this guide.

Photo: Adobe® Photoshop®



- Quickly create a photo library to share with friends
- Edit on the fly, even when other tasks are running in the background
- Apply filters and make edits with ease

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²When comparing an Intel® Pentium® 4 processor with HT Technology 3 GHz/800 FSB to an Intel® Pentium® III processor 500 MHz

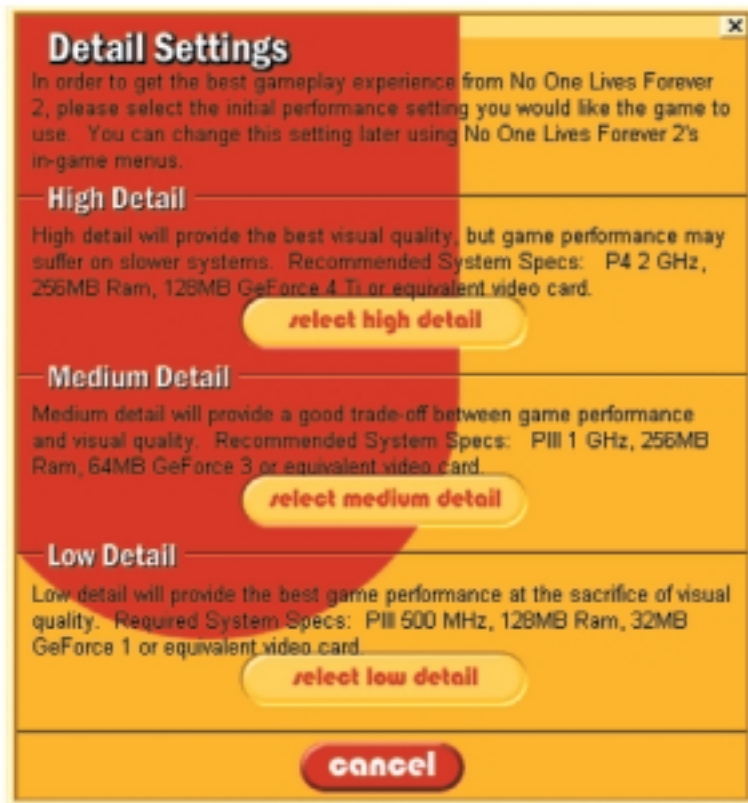


See configurations on the back page of this guide.

Software Evolution Performance

Software advancements continue to require more and more processing resources, and Intel has continued to evolve new technologies to respond. In turn, software developers write new programs specifically designed to take advantage of the latest Intel® processor technologies. Applications like photo and video editing, DVD authoring, MP3 encoding and advanced gaming are now a reality because software developers can create applications based on the latest high-performance PCs. As an example, in 2002 Sierra Entertainment* released the game “No One Lives Forever* 2,” in which a user with a faster processor experiences a richer gaming environment.

The Intel Pentium 4 Processor with HT Technology will provide you with an incredible experience on today’s software, and also is prepared for emerging applications like MPEG4 video, Voice-over-IP and personal video recording (PVR).



Many of today's games require a 2 GHz or faster processor for best visual quality. This setup screen from "No One Lives Forever 2" shows the gamer a choice of quality settings to best match their specific system.



New Platforms Deliver Exciting New Features

While the processor is the “brain” of the PC, other platform components contribute to overall responsiveness, performance and reliability. Continuing in the tradition of ongoing platform improvements, the new Intel® 865 chipset family and Intel® 875P chipset deliver advanced features that enhance the desktop experience.

Intel® 865 chipset family-based platforms

- 800-MHz FSB (Intel® 865G and 865PE chipsets) and Dual Channel DDR400 provide a balanced platform for quick response to today's applications
- AGP 8X and integrated 5.1Ch. surround sound enable intense audio and detailed graphics, improving the gaming and entertainment experience
- Serial ATA delivers faster drive access for quick digital media editing
- Intense graphics capabilities delivered through AGP 8X or integrated Intel® Extreme Graphics 2 (Intel 865G chipset)

Intel® 875P chipset-based platform

- Intel's highest performing platform, designed with enthusiasts in mind
- Delivers Intel 865 chipset family features plus Intel® Performance Acceleration Technology for intense gaming, incredible digital media creation and unmatched system responsiveness



For more information, visit us on the Web at www.intel.com/info/hyperthreading

This document includes information concerning the Intel® Pentium® 4 processor with support for Hyper-Threading Technology. Hyper-Threading Technology requires a computer system with an Intel® Pentium® 4 processor supporting HT Technology and an HT Technology enabled chipset, BIOS and operating system. Performance will vary depending on the specific hardware and software you use. See www.intel.com/info/hyperthreading for more information including details on which processors support HT Technology.

Source: Intel Configuration: Intel® Pentium® III processor at 500 MHz – Intel® Desktop Board SE440BX-2, 128-MB PC100 CL2 SDRAM, Leadtek® WinFast GeForce® 3/ nVidia® GeForce 3 4x AGP Graphics, nVidia® Detonator 3 reference driver 21.81, IBM DTLA-307030 30-GB ATA-100 Hard Drive, Intel® Application Accelerator v1.1, Windows® XP default driver Ultra DMA Mode 2; Pentium 4 processor 2.40 GHz/533 MHz – Intel® 875P Pre-Production Desktop Board, 512-MB DDR333 CL2.5-3-3; Intel® Pentium® 4 Processor with HT Technology 2.40 GHz/800 MHz, 3 GHz/800 MHz – Intel 875P Pre-Production Desktop Board, 512-MB DDR400 CL3-3-3; All Platforms Except Pentium III Processor ATI® Radeon® 9700 Pro AGP 8X, Graphics Driver 6166, Microsoft® Default UDMA-5, Intel® Chipset Software Installation Utility 5.00.1003 beta, IBM® 80-GB 120GXP IC35L080AVVA07-0 ATA-100 Hard Drive; Intel® C & FORTRAN compilers 6.0 for SPEC, DirectX® 8.1, Windows® XP Build 2600 SP1, 100-Mbps Intel® Pro/100+ Management PCI LAN Card. Performance tests and ratings are measured using specific computer systems and/or components and reflect the approximate performance of Intel® products as measured by those tests. Any difference in system hardware or software design or configuration may affect actual performance. For more information on Intel performance, go to www.intel.com/performance

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